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NOTES ON GEOGRAPHIC DISTRIBUTION

First record of *Oxyurella longicaudis* (Birgei, 1910) (Cladocera: Chydoridae) in Minas Gerais, southeastern Brazil

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ABSTRACT: *Oxyurella longicaudis* (Birgei 1910), a species of Chydoridae family, is widely distributed in South and North America. Samples were collected from 40 water bodies in five conservation-priority regions in the south of Minas Gerais state, Brazil, aiming to increase knowledge about Cladocera distribution in this region. *O. longicaudis* was recorded in three of the 40 sampled water bodies. It is the first record of this species in the state.

Oxyurella longicaudis (Birgei 1910) is a Chydoridae species, which lives in the littoral zone of lakes and reservoirs and is associated with macrophytes. The parthenogenetic females are bright orange, with a flattened body, eye bigger than ocellus, postabdomen elongated, narrowing distally, the last two anal denticles are much larger than the others, a large keel of labrum, with pointed end and have incomplete molting (Elmoor-Loureiro 1997; Van Damme and Dumont 2010). Absence of setules on labral keel and strong distal teeth on postabdomen distinguish it from other Oxyurella (Hollwedel et al. 2003).

There are records of *O. longicaudis* in North America (southern United States) and South America (Neotropic regions). In Brazil, there are records from the northeast (Ceará, Pernambuco, Bahia and Maranhão states), central west (Mato Grosso, Mato Grosso do Sul and Goiás states) and the southeast (Rio de Janeiro and São Paulo states) (Elmoor-Loureiro 2007; Damne and Dumont 2010; Rocha *et al*. 2011). Although there are many studies of zooplankton communities in Minas Gerais, such as in the Furnas and Pampulha reservoirs (Bezerra-Neto and Pinto-Coelho 2003; Eskinazi-Sant'Anna *et al.* 2005; Corgosinho and Pinto-Coelho 2006; Santos *et al.* 2009) and water bodies in the Vale do Rio Doce river region (Dumont and Tundisi 1997; Maia-Barbosa *et al.* 2008; Pinto-Coelho *et al.* 2008), faunistic studies of the south of Minas Gerais are still scarce.

In 2009, a government program was created to investigate the biodiversity of species present in the state of Minas Gerais: the Biota Minas Program. For the investigation of the zooplankton species, samples were collected from 40 water bodies in five conservation-priority regions (Serra da Mantiqueira, Várzeas do Sapucaí, Planalto de Poços de Caldas, Guaxupé and Monte Belo) in the south of Minas Gerais state, in January and July of 2010. The organisms were collected in the littoral zone of ponds by vertical and horizontal hauls using a zooplankton net of 68µm mesh size. Samples were taken close to or inside macrophyte stands and were deposited in the Collection of the Laboratory of Limnology at the Federal University of Alfenas (UNIFAL-MG), Minas Gerais state, Brazil (samples C.L. 2246, C.L. 2265).

O. longicaudis was found in only three of the 40 sampled water bodies, two in the Serra da Mantiqueira (Epamig and Rancho Alegre ponds) and one in Várzeas do Sapucaí. These are shallow and small-sized water bodies characterized as oligotrophic with good oxygenation (6.6 at 9.1mg.L^{-1}), low electrical conductivity (15 at 31 µS.cm^{-1}) and slightly acidic pH (5.1 at 6.2). The Epamig pond (21°56'33"S 45°18'56"W) is situated in the Lambari district, in front of the Nova Baden reserve, which includes a large forest fragment. This pond has an extensive bank of macrophytes and is near to a rice plantation. Specimens of *O. longicaudis* were not found in qualitative and quantitative samples, but in extra live material collected for life cycle experiments. The Rancho Alegre pond (22°02'55"S 45°36'23"W) is located in the Heliodora district. This pond was surrounded by grass for raising cattle and had an upstream forest fragment. There was a bank of *Eichhornia azurea* macrophytes in this pond. *O. longicaudis* was only registered in a quantitative sample at a low density (30 ind.m^{-3}). The last pond (21°42'33"S 45°43'44"W), in Várzeas do Sapucaí, is situated in a floodplain close to the Sapucaí river and surrounded by grass. *Ludwigia* sp. macrophyte was present.

Although there are records of *O. longicaudis* in North America and South America, including Brazil, the species had not been previously recorded in Minas Gerais (Elmoor-Loureiro 2007; Souza *et al.* 2009; Van Damne and Dumont 2010). In another study of water bodies in São Paulo state, Rocha *et al.* (2011) reported that *O. longicaudis* occurred more abundantly in preserved environments. Van Damne and Dumont (2010) recorded this species in oligotrophic water bodies, which were shallow, with low electrical conductivity, well oxygenated and pH from neutral to alkaline. In a review carried out for species of Cladocera in Minas Gerais, Eskinazi-Sant'Ana (2005) and Santos-Wisniewski *et al.* (2011) did not observe the occurrence of *O. longicaudis* in this state, therefore this is the first record of this species.

According to Van Damme and Dumont (2010), specimens of *O. longicaudis* from the Lençóis Maranhenses are easily maintained in the laboratory and the population is growing rapidly fueled by *Scenedesmus* at 25 ° C. Besides this, these organisms are tolerant to temperature changes

and are active swimmers. The same was observed for specimens from Epamig pond; however, cultured at 23°C and fed with *Pseudokirchneriella subcapitata* and a mixed suspension of yeast and fish ration.

O. longicaudis was recorded in only two of the five studied conservation-priority regions of south Minas Gerais, but the low frequency of this species found in plankton samples can be due to methodological issues as, in most studies, sampling is carried out in the littoral region. However, these are a phytophilous organisms that live in association with macrophytes in the littoral zone of water bodies or are present in the sediment (Sousa and Elmoor-Loureiro 2008). Furthermore, the species shows characteristics of a benthic mode of life, such as flattened body, reddish coloring and large anal denticles and incomplete molting (Figures 1 and 2) (Kotov 2006). Thus, more faunistc studies are necessary and important to increase knowledge about the distribution of this species in and composition of fauna in water bodies of conservation-priority areas.

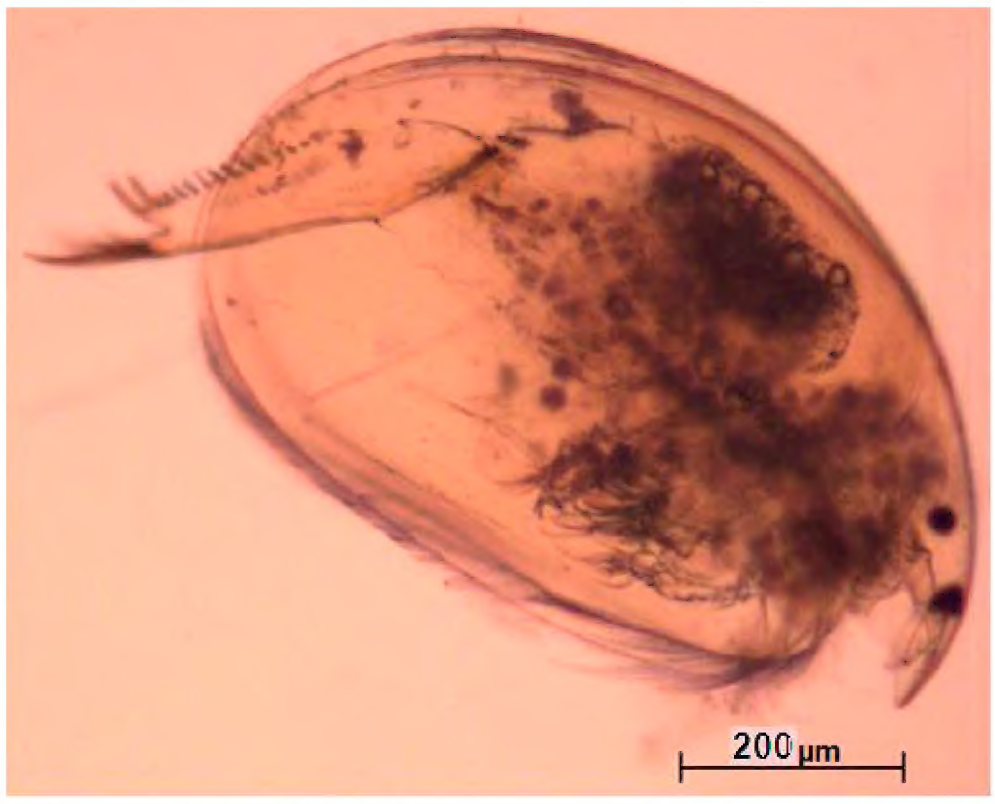

Figure 1. *Oxyurella longicaudis* from Epamig pond in Lambari, Minas Gerais state, Brazil: female, general view.

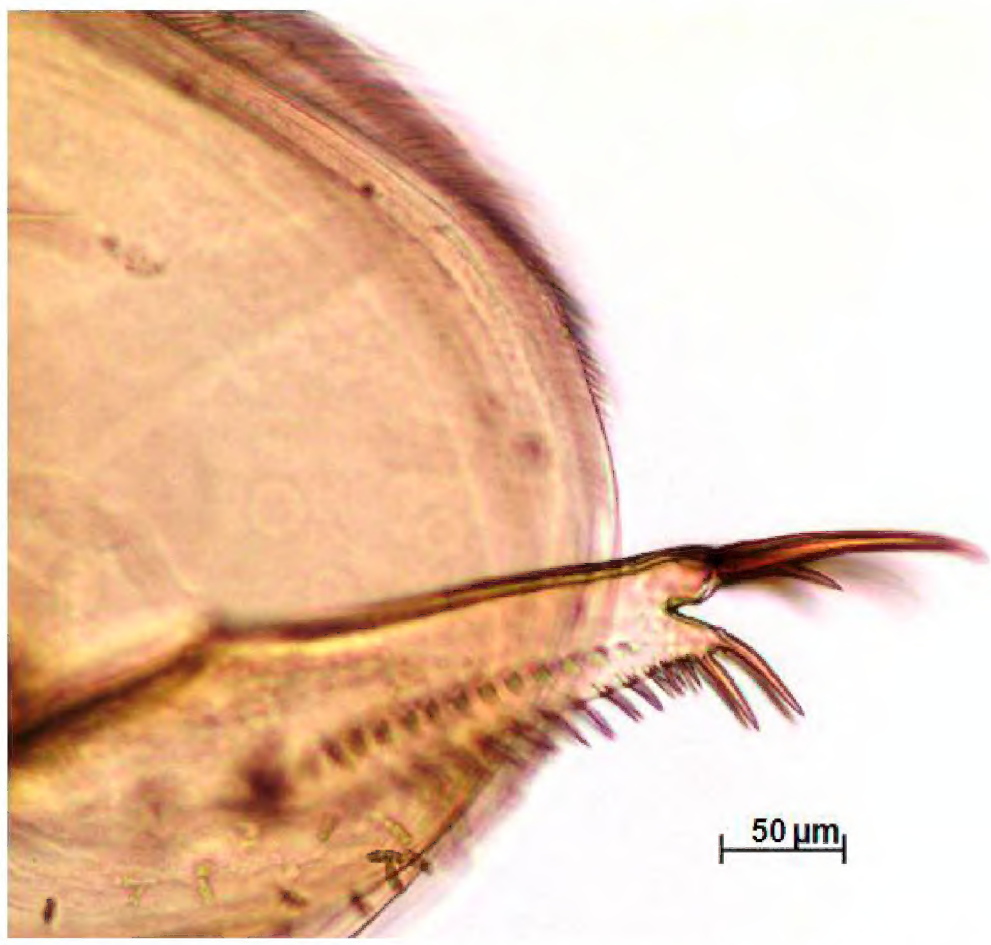

Figure 2. *Oxyurella longicaudis* from Epamig pond in Lambari, Minas Gerais state, Brazil: postabdomen.

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